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# USSR Report

TRANSPORTATION

No. 88

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## RAILROAD

### RAILWAY NETWORK'S PERFORMANCE FOR FIRST QUARTER OF 1982 ASSESSED

#### Second Quarter Summary

Moscow GUDOK in Russian 13 Apr 82 p 1

[Text] "The Second Quarter--A Sharp Increase in the Amount of Traffic"--Despite the extremely unfavorable meteorological situation in a number of the country's regions, many collectives completed successfully the first quarter of the second year of the 11th Five-Year Plan. A number of railroads and many of the branch lines accelerated the turnover of cars in comparison with last year. The greatest successes in this regard were achieved by the collectives of the Moscow-Kursk, Kazatin, L'vov, Sumsk, Krasnolimanskiy, Yerevan, Voronezh, Volzhskiy, Gur'yevsk, Chuyskiy, Chusovoy, Chelyazinsk, Omsk, Novosibirsk, Tayshet, Irkutsk, Ulan-Ude and Vladivostok branch lines, which not only speeded up the car turnover as compared with the first quarter of last year but also fulfilled the assignment. They made available up to 9,000 cars daily, which can be used to transport additionally about 7 million tons of freight.

Some increase was also made in the static load as against the first quarter of last year.

However, not all the collectives and branch lines were ready to overcome the winter difficulties. Some of the branch managers failed to organize clearing of snow from the tracks on time and were not able to provide for steady operation of the technical facilities, particularly the rolling stock; they maintained an extremely slow pace in overcoming the consequences of the snowstorms and the low temperatures. As a result the level of movement of trains fell off sharply, the progress of car flows was slowed up, and the operational expenditures increased sharply. The following collectives of the branch lines had an especially poor record in their use of the cars: the Leningrad-Finland line, where car turnover was 1.12 days greater than the prescribed norm, the Murom line--0.7 days, the Khabarovsk line--0.69 days, the Samtredskiy and Leningrad-Vitebsk lines--0.68 days, the Volkhovstroyevskiy line--0.59 days, the Karaganda line--0.56 days, and the Astrakhan line--0.31 days.

The collective of the Privolzhskiy mainline apparently did a poorer job of organizing the movement of trains in comparison with last year. Its level of

fulfillment of the schedule is the lowest on the network. In comparison with last year the tardiness of the trains on their routes in the first quarter was 25.5 percent greater on this mainline and reached 147,400 hours. Just as compensation for these losses it was necessary to maintain 96 additional locomotives, 234 locomotive crews and 3,410 cars from the operational fleet. There would be quite enough of these resources not only for fulfillment but also for considerable overfulfillment of the assignments.

Making no use of the reserves on hand, the executives of the railroads and branch lines rejected the surplus car inventory by any possible means, including inadmissible ones. Attempting to limit the acceptance of trains from the Southeastern Railroad, the managers of the Rtishchevskiy branch line sent back the locomotive crews from Povorino even though there were up to six ready trains at the station. The trains destined for Orenburg and Arys' were sent by a roundabout route via Penza even though they were supposed to go via Saratov and the trains from Kochetovka were supposed to go via Povorino instead of Kirsanov.

The same illegal methods were also employed by the managers of the Volgograd and Astrakhan branch lines.

Because of the serious deficiencies in the organization of the movement of trains no provision was made for the delivery and transport of local cars. This was the reason for the nonfulfillment of the assignment for unloading on the Privolzhsk mainline. The layover of cars at the freight stations increased considerably.

Similar deficiencies in management of the train traffic were in evidence on the Azerbaydjan, Kuybyshev, Tselinna, Transbaykal, Far Eastern and Gor'kiy lines.

In the second quarter the railroads were obliged to not only fulfill the plan for dispatch of freight but also to make up the indebtedness contracted in the first quarter. This requires finding an additional 46,000 cars a day. There is just one reserve for this--more efficient use of the rolling stock. It should be mentioned that accelerating the process of preparation of the trains and cars at the freight stations by only 10 minutes makes it possible on the network scale to daily free more than 20,000 cars for additional shipments. If we take into account the fact that at some stations the trains lay over 10 hours and more and at some even ready trains wait 5 hours each for dispatch, then it becomes clear what reserves are at the disposal of transport. The chief task now is to sharply increase the amounts of traffic, to dispatch the ready trains from the stations on time, and to step up the level of delivery to the junction points, particularly on the Oktyabr', Gor'kiy, Sverdlovsk, Buybyshev, Privolzhsk, Transbaykal and Far Eastern railroads, which have surpluses of transit freight.

It is essential that some managers of railroads and branch lines adopt a changed attitude with respect to the use of the traffic capacity of the short lines which are served by diesel locomotive traction. Diverting part of the car flow from diesel locomotive operation to electrified operation not



only increases the need for locomotives and locomotive crews and slows up the delivery of freight but also creates an artificial supersaturation of the electrified sectors and, as a consequence, worsens all the technical and economic indicators.

The people who ought to be held to special account are the executives of the South Ural, Kuy, Alma-Ata, West Siberian and Tselinna railroads and the managers of the Orenburg, Ufa, Semipalatinsk, Astrakhan, Kokchetav, Yershov and Altaskiy branch lines, which are not taking the necessary measures to allow the flow on the newly built lines.

The second quarter represents the crucial point of the repair and track work. The experience of the preceding years shows that on the days when "windows" are provided delivery of cars is reduced by 7-8 percent for the network as a whole. It follows from this that the railroad personnel must step up the production at the "window" in order to reduce the losses of traffic capacity of the lines.

In putting in operation the second-quarter plan for shipments a substantial reserve is the use of the freight capacity and space of the cars. Increasing the static load by only 100 kilograms makes it possible to transport with the same operational fleet about 2 million additional tons of freight. On the South-eastern, Kuybyshev and South Ural Railroads there are in transit 15,000 loaded cars above the working fleet norm.

#### Evaluation of March

Moscow GUDOK in Russian 21 Apr 82 p 1

[Text] "How the Rail Line is being Maintained--Results for March"--The special track inspection carried out in March on all the roads made it possible to detect and eliminate many malfunctions. At the railway divisions they intensified the checking of the rails with defect detection facilities. All this produced positive results and reduced the number of unsatisfactory kilometers.

The highest indicators were achieved by the railroad personnel of the Transbaykal, Belorussian, Norther, Gor'kiy, South Ural, West Siberian and Krasnoyarsk lines. At the same time, on the Volga, Transcaucasus, Alma-Ata and Far Eastern lines the condition of the tracks is now worse than it was in March of last year and the number of kilometers maintained in an unsatisfactory manner has even increased.

Not everything is going well with respect to revocation of the warnings which are not specified by the schedules for the movement of the trains. An especially large number of speed limitations are in effect on the Privolzhsk, Oktyabr', Moscow and Pridneprovsk lines. This is retarding the progress of the car flow and in a number of cases giving rise to disruptions of the schedules for the movement of passenger and suburban trains.

To correct the situation it is necessary to organize a spring commission inspection of the track operation and also to provide at the same time for prompt elimination of the malfunctions. Special attention must be given to the reinforcement of the clamp, terminal and track bolts.

On the basis of the results of the work in March the top three places were occupied by the personnel of the Transbaykal, Belorussian and East Siberian railroads. In the three last places were the collectives of the Sverdlovsk, Privolzhsk and Pridneprovsk lines.

#### Early April Statistics

Moscow GUDOK in Russian 22 Apr 82 p 2

[Text] Delivery of Railroad Cars in April--During the two ten-day periods of April there was overfulfillment of the prescribed assignment for delivery of loaded cars by the railroad:

Railroads	Deliveries of Loaded Cars Above the Norm per Day	Number of Transit Cars in % of the Norm
Baltic	400	122
Kemerovo	250	105
West Siberian	240	100
Moscow	230	104
Kransnoyarsk	220	106
Belorussian	90	112
Sverdlovsk	44	124

These roads are delivering 1,670 cars each over and above the assignment. However, for the network as a whole delivery at the junctions has been 16,900 cars below the assigned amount; of these 11,600 are loaded cars. This means that freight is being delivered to the destination at an extremely slow pace.

The following railroads have had the greatest disruption of delivery:



Railroad	Deliveries of Loaded Cars Above the Norm per Day	Number of Transit Cars in % of the Norm
Privolzhsk	1,900	121
Kuybyshev	1,200	114
South Ural	900	124
Gor'kiy	700	120
Southern	500	114
North Caucasus	350	128
Transbaykal	140	147

These seven railroads are delivering 5,700 cars less than the expected quantity.

The largest surpluses of transit cars are held up before the junctions as follows:

Junction Points	Number of Transit Cars Above the Norm
Arkhara	6,800
Petrovskiy Zavod	2,500
Tayshet	1,800
Cheptsa	2,800
Druzhnino	1,800
Chelgel'dy	4,500
Korpachevo	2,800
Tobol	1,400
Samur	2,200

These nine junctions are delaying up to 27,000 transit cars above the norm, more than 50 percent of the junction surplus.

Especially alarming is the fact that this number includes open cars and tank cars, which are in short supply. Thus, on the Odessa, Southern, Donetsk, North Caucasus, Southeastern, Kuybyshev and South Ural railroads 15,000 loaded cars are being kept in transit above the operational fleet norm. On the Transbaykal, East Siberian, South Ural and Gor'kiy lines the number is more than 5,000 loaded cars.

#### April Statistics

Moscow GUDOK in Russian 4 May 82 p 2

[Text] Delivery of Railroad Cars--In April many of the roads maintained normal operation of the railroad car flows. In the delivery of loaded cars good results were achieved by the Baltic, West Siberian, Kemerovo, Oktyabr', Krasnoyarsk and Moscow roads, which delivered from 400 to 200 cars a day above the norm and all together 1,730 loaded cars. The Southwestern, Belorussian and Moldavian roads also overfulfilled the delivery plan.

However, for the network as a whole the total delivery was 18,500 cars below the plan, including 12,800 loaded cars. The greatest disruption of delivery of loaded cars occurred on the Privolzhsk, Kuybyshev, Tselinna, North Caucasus, South Ural and West Kazhakstan roads. These six mainlines had daily deliveries of 8,500 cars less than the assigned quantity. This comprised half of the network disruption.

As a result of the nonfulfillment of the assigned quantities of traffic in the third ten-day period the amount of transit increased by 21,000 cars, especially on the Alma-Ata, Baltic, North Caucasus, Sverdlovsk, L'vov, Gor'kiy, Privolzhsk, Tselinna, Southwestern, Odessa, Donetsk and Moscow lines.

The delay of transit cars above the norm included a large quantity of rolling stock in short supply. Thus, for example, the Transbaykal, South Ural, Kuybyshev, Gor'kiy, North Caucasus, Donetsk and Privolzhsk lines had in transit more than 20,000 open cars above the norm and the East Siberian, Transbaykal, Moscow, Southeastern, Privolzhsk and North Caucasus lines had about 7,000 tank cars in this category.

In April there continued to be high rates of excess of transit for the most important junction points which determine the operational situation on the network of roads.

Junction Points	Number of Transit Cars above the Norm in Both Directions
Arkharu	7,600
Petrovskiy Zavod	3,100
Tayshet	1,700
Chengel'dy	5,300
Anar	3,800
Kropachevo	3,300
Chentsa	3,900
Druzhinino	3,300
Valuyki	2,000
Samur	3,300
Martsevo	1,700
Trusovo	1,600

The above 12 junction points are delaying more than 40,000 transit cars above the norm. This is nearly 60 percent of the network surplus. Normalizing the work of these junctions will in many respects solve the problem of more uniform distribution of the car inventories among the regions of the network and will increase the loading resources.

The level of overall delivery was also affected by nonfulfillment of the assignments established by the regulations. Thus, for example, just the Oktyabr', Moscow, Southwestern, Odessa, Azerbaydjan, Southeastern and Sverdlovsk lines had a delivery arrears of 900 empty open cars and 750 tank cars a day from unloading. Also unfulfilled was the assignment for delivery of empty platforms. This seriously affected the decisive freight: coal, metallurgical ore raw material, timber and petroleum products.

May has arrived. It is essential to increase the loading figures actually achieved in April by 6,800 cars a day. This task can only be accomplished with normal progress of the car flows. As against April delivery must be increased by 20,000 cars a day. The task is difficult but wholly realistic. Proof of this is furnished by the results of the first 2 days of May, when delivery even as against the increased norm was exceeded by 11,000 and 13,000 cars respectively.

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VARIOUS TYPES OF HOUSES FOR BAM WORKERS DESCRIBED

Moscow NA STROYKAKH ROSSII in Russian No 2, 1982 pp 50-52

[Article by B. Gol'dguber, chief designer of the Division of Transport Building Construction, VPItransstroy [All-Union Planning and Technological Institute of Transport Construction], MINTRANSSTROY [Ministry of Transport Construction] USSR: "Over-all Development of the Siberian and Far East Regions--The Construction of Inventory Buildings of the Container Type on the BAM"]

[Text] In the erection of settlements for the construction workers on the Baykal-Amur Mainline [BAM] the facility that has been most widely used is represented by the inventory buildings of the container type.

The container buildings are made in two types: the single-unit ones, ready for operation after their delivery and installation; the multiunit ones, which consist of several containers (units).

For the construction of settlements on the BAM we used single-unit container buildings of series 420-04, two-unit and multiunit ones of type UGPD-2E, cylindrical unified TsUB-2M units, and multiunit one- and two-story buildings of series 420-21 and IKZE.

The series 420-04 single-unit buildings 6000 x 2700 x 2680 mm in size, as developed by the Orgenergostroy [All-Union Institute for the Planning of Electric Power Projects], comprise single-unit wooden containers of panel construction with metal supporting frames. The building unit has a supporting frame made from No 8 dual T-beams, girders and angle brackets. Its weight is 4.5 tons and its usable area is 14.4 square meters. The supporting wooden frame of the container consists of 50 x 75 mm bars, connected by an awl on spikes and forming a girderless frame. The rigidity of the container units is maintained by steel angle bars and cover plates.

On the outside the frame of the unit is lined with shaped board of 1 cm thickness and on the inside with the same board or medium-hard DVP [wood fiber slabs] with thermal packing made from mineral wool slabs or insulating DVP. The roof panels are covered with roofing paper.

The containers are installed on wooden antisepticized foundation beams by autocranes with a load capacity of 10 tons and more with the help of a transverse beam. The service life of the containers is 15 years and the turnover is 11-13 times. The series 420-04 single-unit container buildings are used in the BAM settlements for office and everyday service quarters (Ill 1)

Ill 1. Post Office in Novotyndinskiy

Settlement (Series 420-04)



The TsUB-2M inventory cylindrical unified units (Ill 2) are earmarked for workers who are under field conditions with a rated temperature of the outside air of -56 degrees and they are used as dormitory facilities for 4 persons. Their service life is 20-25 years. The total area of the rooms is 18.4 square meters, including a bedroom 8.64 sq meters, a hall 3.88 sq meters and a kitchen 1.75 sq meters.



111 2 Dwellings made from TsUB-2M cylindrical units in Tynda



111 4 Single-apartment dwellings of volumetric UGPD-23 units in Magistral'nyy





111 5. Series IKZE two-section dwelling in Tynda

The block is a welded cylinder of No 8 girders made from steel of 2.5 mm thickness and 3.2 meter diameter with reinforcing rings. As heat insulation material they use PSB-S foamy polystyrene of 100 mm thickness. The inside facing of the block is made from hard DVP and plywood and the interior surface of the walls is finished with ornamental plastic.

The partitions of the unit have a wooden frame faced on two sides with a pointed DVP and plastic. The floors are paneled and covered with linoleum. The middle panels in the floor are removable for purposes of checking and repair of the heating system.

Electric power is fed to the units from an outside source.

Heating in the units is obtained from water with natural circulation from a cast-iron sectional boiler or from a boiler with electric heaters. Provision has also been made for connecting the system to the central heating lines.

The windows in the unit are the nonopening type with triple vitrification. Included is a natural system of ventilation via deflectors and an influent channel vent on the front panel and forced air employing a VO-1 ventilator from the kitchen to the vestibule.

By means of a crane with a lift capacity of 10 tons and more this dormitory type dwelling unit is installed on the undercarriage set up in a previously prepared yard with an organized discharge of rain water.

The installation of the TsUB-2M units is carried out in the following sequence: the unit is slung by the loops and they are wound into the places as indicated by the stencil "chain"; they are raised to a height of one meter; the front trolley is placed under the unit and the spring ends are fastened in the angle brackets; the openings under the spring pins in the foundation plate are joined with the spring with openings in the jaws of the brackets; the spring pins are inserted and the washers are put in and splinted; the unit is released; the bolts for fastening the spring to the axles are tightened. For dismantling the sequence of these operations is reversed.

In Tynda and in the settlements of Novotyndinskiy, Magistral'nyy and many others entire streets have been built with single-story, one-apartment houses of the UGPD-2E type based on the design of the Gidroproyekt [All-Union Planning Institute], Minenergo USSR (Ill 4).

The building is assembled from two volumetric wooden units (containers) measuring 8862 x 2765 x 3200 mm and weighing 8 tons; they are put out by the Bratsk woodworking combine. It has two insulated rooms measuring 10.1 and 20.17 square meters in area, a kitchen (4.75 sq meters), a sanitary center (2.48 sq meters) and an anteroom (4.57 sq meters). A vestibule-shed has been added to the house. The apartment is equipped with autonomous water heating and it is possible to hook it up to the outside heating networks.

The strong metal frame of the blocks makes it possible to install them on specialized wooden supports which are laid on a leveled platform with a slope for the run-off of outside waters. The lack of a foundation makes it considerably easier to install them on soft, frozen and permafrost soils. They are installed by a team of six persons with the help of a crane with a lift capacity of 10 tons and more. The design is appropriate for an outside air temperature to -56 degrees Celsius.

The service life of the buildings is up to 20 years with a 4-5-fold turnover.

In the RAM settlements, in addition to the one-story structures, two-story dwellings of the UGPD-2E type have been built.

Adopted as the basis for this dwelling is a four-apartment section composed of eight container units interlocked in pairs and installed on two levels of removable units with a staircase in between them. Every apartment with a useful area of 41 square meters has two rooms and accessory premises and is suitable for one family of 4-5 persons or for a 7-person dormitory.

The area of the four-apartment section building with staircase is 122.5 square meters. The two-story homes use the same blocks as the one-story ones. The installation is usually done by a team of eight carpenters and installers with the aid of a crane with a lift capacity of 16 tons and a 15-meter boom.

The increased structural rigidity of the UGPD-2E units makes it possible to build the houses without foundations and with simplified supports. When there is sagging of some of the support points of the building the structures of the house are not distorted.

In the home-building work of the settlements for the BAM construction workers the design used most widely is that for the series IKZE and 420-21 home, as developed by the GIPROPROMTRANSSTROY [State Planning Institute for Industrial Transportation Construction] and manufactured by the Nizheudinsk container buildings plant and the Saninskiy and Solginskiy woodworking combines of Mintransstroy [Ministry of Transport Construction] USSR. They are suitable for an outside air temperature to -50 degrees Celsius, a snow cover pressure of 100 kg/cm<sup>2</sup>, and a wind factor of 45 kg/m<sup>2</sup>. The service life, with a five-fold turnover, is 20 years.

The Nizheudinsk plant produces one-story single-apartment dwellings of two and three rooms, a dormitory for 50 persons, a kindergarten-nursery for 50 children, and a two-story dwelling for six apartments. The Saninskiy and Solginskiy woodworking combines produce a one-story house for a four- and two-level home of six apartments and a 50-room dormitory.

The four-apartment house (series IKZE-2) is composed of two sections for two apartments each 6 meters removed in the plan by means of interlocking sections. This makes it possible to take the topography into account and to provide for a diversity of dwelling structure (Ill 5). The sections were developed for two- and three-room apartments.

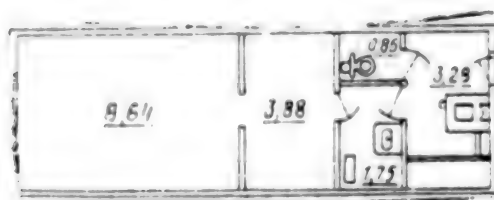
Each house consists of volumetric container units fully prepared by the plant, 3 x 6 meters in dimensions, 2.88 meters high, and individual preassembled elements of the foundation, roof and porch. The communal rooms have an area of 15 square meters and the bedrooms are 11.2 and 15.1 square meters; the kitchen (6.4 sq meters) is equipped with a washing machine. In one unit with a kitchen there is a separate sanitary facility set up.

In the plant facilities the interior surfaces of the rooms are finished in keeping with their purpose--stained with paint or pasted up with wallpaper. The floors in the dwelling rooms are covered with linoleum over a thermal insulation foundation--in the rest of the rooms with a multilayer linoleum. The floor is raised above the ground level so that the space above the floor has a height of 0.8 meters, enabling them to connect the engineering communications of the house to the outside networks.

The units (containers) are manufactured from three-layer panels of foundation covering with a support frame, side and lengthwise walls, and a garret floor with rigid interconnections using glue and wood screws. For heating they use phenol sheet or mineral wool slabs on a bitumen binder.

The installation of these buildings is carried out by a team of five carpenters-installers in the following sequence: the foundations made up of wooden antiseptitized posts are installed in the holes which are then filled with a soil mixture. Installed above the posts are antiseptitized beams 150 mm high, which are fastened to the posts by brackets on two sides. On the upper part of the beams they apply a layer of roofing paper or Ruberoid and strips of antiseptitized insulating wood fiber slab 12 mm thick. Then they install the first volumetric unit (container) which was delivered to the place of installation.

It is recommended that installation begin with the heating unit block. The installation is done by a crane with a lift capacity of 16-25 tons and a boom of not less than 10 meters. The blocks are installed close together and the grooves are sealed up. Then the roof structures are installed: the joists, the attic slabs and the roof panels. Connections are made between the heat and water pipe lines and the electric feed lines; also, the sewage and electric supply. The communications are hooked up to the outside networks.



### III 3. Plan of a cylindrical TsUB-2M unified block

The VPItransstroy [All-Union Planning and Technological Institute for Transport Construction] compiled technological charts for the setting up of dwellings of this type.

They try to construct the inventory buildings in such a way that their entrances are located on the windward side. In the vertical leveling of the land area and in the organization of the discharge of surface waters they endeavor to retain the natural topography, the soil cover and the natural vegetation.

In the sectors made up of Category I and II permafrost soils (little or no garden soil) the vertical leveling is carried out in the summer period by the usual methods--cutting, filling, and smoothing the slopes with bulldozers and scrapers. And the leveling of the land composed of Category III and IV soils (garden soils) is done only by filling with soil brought in.

In broken terrain the inventory buildings are erected by both the terraced and nonterraced methods with due regard for the extent of the slope of the terrain and the setup with respect to the slopes. In the construction on slopes, in order to avoid accumulation of water and snow in the excavated

basements, these latter are protected by light-weight inventory panels made from flat asbestos cement sheets which are fastened to wooden rods.

The inventory buildings of the container type have proved to be the best form for the erection of settlements for the construction workers. They are the most comfortable, require the least amount of labor, and are easy to dismantle and relocate.

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CSO: 1829/165

INVESTMENT, LABOR, OTHER ASPECTS OF BAM CONSTRUCTION DISCUSSED AT CONFERENCE

Moscow OBSHCHESTVENNYYE NAUKI in Russian No 3, 1982 (signed to press 20 Apr 82)  
pp 199-205

[Article by A. Kin, candidate of economic sciences and learned secretary of the Scientific Council of the USSR Academy of Sciences on Problems of BAM: "Comprehensive Development of the BAM Zone"]

[Text] Continued growth in the economic potential of the USSR and its foreign economic ties in the future depend greatly on development of the rich natural resources of the eastern parts of the country, including the zone of the Baikal-Amur Trunk Railroad (BAM). The 26th CPSU Congress posed the challenge of opening through traffic along the entire length of the BAM in the 11th Five-Year Plan and expanding work for economic development of the zone near the road. This task determined the content of the 3rd All-Union Scientific-Practice Conference on Problems of Economic Development of the BAM Zone, which was held on 22-24 September 1981 in Ulan-Ude, the capital of the Buryatskaya ASSR.

Whereas the two earlier conferences in Chita in 1975 and in Blagoveshchensk in 1977 were exploratory and outlined an approach to development of the scientific foundations of a target program for development of the BAM zone and the composition and production structure of future territorial-production formations, at the conference in Ulan-Ude an evaluation was given of research results and directions of further work were outlined from the standpoint of the unified comprehensive BAM target program as a constituent part of the state plan of economic and social development.

The conference was organized and conducted by the Scientific Council of the USSR Academy of Sciences on Problems of BAM<sup>1</sup> together with the Siberian Division of the USSR Academy of Sciences, the Far Eastern Science Center of the USSR Academy of Sciences, the Buryatskaya Oblast CPSU Committee, and the Council of Ministers of the Buryatskaya ASSR, with participation by the Council for the Study of Productive Forces of USSR Gosplan, the USSR Academy of Sciences' Commission for the Study of Productive Forces and Natural Resources, and the Central Scientific Research Economics Institute of RSFSR Gosplan.

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<sup>1</sup>Concerning the Council see OBSHCHESTVENNYYE NAUKI, 1979, No 6, pp 180-184



More than 800 scientists and important party and management workers representing 31 academic institutes, 52 sectorial institutes, and practical organizations of 32 ministries and departments took part in the work of the conference. They discussed the tasks, structure, and content of the comprehensive target program for economic development of the BAM zone developed in conformity with the 12 July 1979 decree of the CPSU Central Committee and USSR Council of Ministers.

Twenty-one reports were presented at plenary sessions. More than 200 persons spoke in the sections.<sup>2</sup> The reports and statements reviewed the basic problems of building and operating the trunk railroad and the key issues of economic development of the BAM zone, construction of housing and sociocultural facilities in the development regions, labor resources and protection of human health, regional economics and territorial planning, establishing a food base, and others. A special session was devoted to discussion of the problems of development of the oblasts, krays, and autonomous republics adjacent to the railroad in connection with economic development of the BAM zone.

A. Modogoyev, member of the CPSU Central Committee and first secretary of the Buryatskaya Oblast CPSU Committee, spoke to participants in the conference. He noted the great contribution made by scientists and specialists to resolving the scientific, technical, economic, social, ecological, food, medical, and other problems of development of the BAM zone. The speaker emphasized that the chief factor in economic development of the zone is human beings, and this is why the target program focuses attention on questions of establishing the social-domestic infrastructure, meeting people's needs for good housing, schools, institutions for children, hospitals, clubs, and the like, and getting new arrivals to settle permanently and develop the natural wealth of the region. Consideration of the regional characteristics of the standard of living and raising its indicators define measures necessary to improve working and living conditions further.

Important officials of the USSR Ministry of Transportation Construction, the USSR Ministry of Railroads, and USSR Gosstroy and representatives of planning organizations told participants at the Congress about construction progress on particular sections of the line and the composition and location of facilities that had been turned over for use. Attention was called to the fact that cutting back on the nonproduction infrastructure as part of the start-up complex makes it difficult to attract, and especially to keep, skilled workers to operate BAM.

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<sup>2</sup> There were 13 sections at the conference: territorial organization of economic development of the BAM zone; socioeconomic problems of economic development of the BAM zone; the geology and mineral-raw material resources of the BAM zone; the forest industry complex; problems of forming the food base of the BAM zone; sectorial and intersectorial problems of formation and development of the sectors of extracting and manufacturing industry; problems of comprehensive use and processing of synnyrits; engineering geology and seismology; construction of the Baikal-Amur Trunk Railroad and installations for economic development of the BAM zone, development of the construction industry; the unified transportation system of the BAM zone and problems of operating the Baikal-Amur Trunk Railroad; ecological problems of the BAM zone; medical problems of the BAM zone.

Expenditures for the social infrastructure constitute 35-40 percent of total objects of investment. The efficiency of economic development and the formation of production sectors depends significantly on city-planning decisions. A series of scientific-planning projects was carried out to determine the optimal pattern of settlement considering the medical-geographical regionalization of the BAM zone. In addition to the settlement map plans were developed for the main regions of concentrated construction. They provide a good foundation for comprehensive territorial organization of production and settlement in the BAM zone. The master plans of cities and communities also play an important role. At the present time most of the cities and communities of the BAM zone have master plans for construction and socioeconomic development.

A number of reports were devoted to the draft of the comprehensive target program for development of the BAM zone and questions of territorial organization of the economy in development regions. These problems were thoroughly treated in the statements by Academician A. Aganbegyan, chairman of the Scientific Council of the USSR Academy of Sciences on Problems of BAM, V. Mozhin, chairman of the Council for the Study of Productive Forces of USSR Gosplan, and V. Chichkanov, director of the Institute of Economic Research of the Far Eastern Science Center of the USSR Academy of Sciences.

To approach the multifaceted problem of economic development of the BAM zone from a scientifically substantiated standpoint, A. Aganbegyan observed, the first thing necessary is to coordinate the jobs of the present day and the long-range goals, to consider the fact that many very important and highly efficient facilities will take 10-20 years to build and return on the invested capital will begin in the 21st Century. This refers to establishment of a major new metallurgical center in the eastern part of the country, development of a new center of heavy industry, construction of the so-called "northern BAM" (a railroad to Yakutsk) and development of huge deposits of mineral products in the regions along the new line, construction of large centers for comprehensive, deep processing of timber, and so on. All this demands an expansion of "time horizons", even in the stage of preplanning substantiation. In addition to performance of the paramount tasks, which are development of the five-year plan and determination of developmental processes for the next 10 years, the scientists and specialists on the Scientific Council for Problems of BAM must look to the long run and view the target programs as a tool for long-range planning which coordinates goals, tasks, and stages of development not only for the 11th Five-Year Plan, but primarily until the year 2,000 and beyond. This approach has already been followed in the draft target program developed under the aegis of the Scientific Council by institutions of the Siberian Department and the Far Eastern Science Center of the USSR Academy of Sciences.

The speaker gave a detailed review of problems related to scientific, planning, and design preparation of the BAM zone for broad development; supplying special equipment and progressive technologies that take account of climatic conditions; and, establishing modern construction bases and a well-developed social-domestic infrastructure. The speaker focused attention on questions of coordinating management of the process of economic development and overcoming the lack of departmental communication and falling behind scheduled times. Constructive proposals were made here that received the approval of participants at the conference in later discussion.

V. Mozhin identified nine centers of concentrated construction which include 16 administrative regions of six oblasts, krais, and autonomous republic located in the BAM zone. Territorial production complexes will be built within them. The features of the spatial distribution of identified natural resources predetermined the production specialization of the future territorial production complexes of the BAM zone. The composition and volumes of the sectors of each territorial production formation in the near future were determined with due regard for the general designs of economic development in this zone and the possibilities of investment based on the nationwide balance of capital investment. The speaker discussed the prospects for development of capital investment in the 11th Five-Year Plan and the period until 1990. He stressed the importance of developing the transportation network, establishing primarily specialized sectors, putting them into operation at the same time, and insuring favorable socioeconomic conditions for life and labor.

V. Chichkanov devoted his talk to further development of the economic potential of the Far East related to economic development of the eastern part of the BAM zone. He noted that at the present time this region still has not been studied adequately to reach scientifically sound long-term decisions. Purposeful study of the resource potential of the region is going forward concurrently with construction of the railroad. It will be included in the established system of the Far Eastern Economic Region by stages.

The questions of establishing a food base in the BAM zone occupied a central place in the report by N. Goncharov, academician of VASKhNIL [All Union Academy of Agricultural Sciences imeni V. I. Lenin], and Iu. Novoselov, deputy chairman of the Presidium of the Siberian Department of VASKhNIL. Construction of the railroad and development of territories adjacent to it has caused an influx of population. The challenge of supplying it with food, especially vegetables and fresh dairy products, has become paramount. Scientists at the Siberian Department of VASKhNIL worked out proposals for development of agriculture in the regions where the BAM passes. The proposals established the volumes of development of land and production of agricultural output as well as necessary capital investment. There are more than 120,000 hectares of land suitable for primary development, including about 60,000 hectares of arable land. The agrarian scientists recommend developing meat-dairy and vegetable farms with due regard for local climatic and natural conditions and using appropriate scientific farming techniques. The authors propose that large construction sites in the BAM zone organize their own subsidiary farms to produce vegetables and dairy products, making provision for them in estimate-plan documents.

The social-demographic problems of formation of labor resources in the BAM zone were considered by L. Rybakovskiy (Institute of Sociological Research of the USSR Academy of Sciences). The speaker recalled that the decision to build BAM was made at a time when there was a favorable demographic situation in the country. In the 10th Five-Year Plan the growth of labor resources was greater than is expected in the upcoming 20 years. But it is for precisely these years that broad economic development of the BAM zone is planned. This makes it especially important to carry out labor-saving policies in the development of new territories.

After analyzing the sources from which labor resources formed and the directions of flows of migration in the BAM construction regions, the speaker pointed out possible changes in their relationships. In recent years the formation of BAM labor collectives has included roughly 40 percent people from regions of Siberia and the Far East. Stable flows of migration have taken shape to the eastern regions from the central regions of the RSFSR, Ukraine, Belorussia, and Moldavia. A new trend has also been observed, for labor resources from the Central Asian republics to move to the BAM zone. The author expressed the thought that this trend will grow stronger and that the solution to supplying labor to production facilities in the BAM zone may possibly lie in attracting human resources from the nearby Central Asian republics. The important thing here is not so much the material stimuli of attracting workers to new construction sites as it is creating full-fledged living conditions in these regions. Therefore, construction of housing, sociocultural facilities, and children's and medical institutions must be done more rapidly, and we must improve supply of consumer goods to the population.

K. Sedov, academician of the USSR Academy of Medical Sciences and chairman of the Coordinating Council of the USSR Academy of Medical Sciences for Medical Science Research in the BAM Zone, gave a thorough analysis of the questions of protecting human health in the construction zone and organizing treatment and preventive service taking into account the age structure of the population with its prevalence of young people. He pointed out the close relationship between medical and ecological problems and their place in the system of socioeconomic development of the BAM zone.

The speaker emphasized that the most important social-medical problem is adaptation of the population to local conditions. The zone of economic development along BAM has complex and contrasting climatic-geographic conditions. Hygienic scientists from the largest and most respected scientific research centers in the country took an active part in working out the ecological and hygienic substantiation for the target program for development of the BAM zone. Their recommendations are taken into account in building cities and communities, siting industrial enterprises, introducing construction machinery, and organizing water supply for the public and for industrial enterprises. A great deal of work is being done to institute a system of sanitary engineering and sanitary-hygienic measures to prevent occupational illnesses.

In the concluding talk A. Aganbegyan noted that carrying out the resolutions of the CPSU Central Committee, the USSR Council of Ministers, and 26th CPSU Congress on development of production sectors in the BAM zone will be a new stage in the continuing build-up of the economic potential of the country's eastern regions. The challenge for scientists is to continue thorough investigations of the multifaceted problems of comprehensive development of the natural wealth of the territories adjacent to the BAM route. Stopping in greater detail on the issues that require priority, A. Aganbegyan emphasized the importance of good, timely surveying, planning, and construction work, observing time tables for completion of projects, efficient use of the thousands of transportation construction workers who have accumulated considerable experience under difficult northern conditions, broad introduction of progressive construction methods (modular block and high-speed flow construction using fully factory-ready consolidated parts) which requires establishing modern construction bases, and supplying production



sectors in the BAM zone with domestically produced machinery that is most suitable for local climatic conditions. Special attention should be devoted to questions of development of the social-domestic infrastructure.

The situation with labor resources to complete construction of BAM and carry on extensive economic development of the territory may grow worse not only because growth of labor resources in the country will decline in the coming years, but also because the capital allocated for development of the social-domestic infrastructure of the BAM zone is inadequate, and even it is not being fully used. The 60 ministries that submitted proposals for the draft target program of economic development of the BAM to set up new production sectors contemplate spending less capital for development of the social-domestic infrastructure than is spent today for these purposes in the settled central regions of the country where the social-domestic infrastructure is in large part completed, and only one-half of the average amount being spent in Siberia. These calculations must be reviewed.

The experience of developing the eastern regions of the country provides numerous positive examples of coordinated management of this process. Construction of BAM would not have gone so well and lack of departmental coordination would have led to immeasurably larger losses if the Commission on Issues of Construction of BAM had not been set up in time at the Presidium of the USSR Council of Ministers. The working experience of this commission makes it very clear that its authority must be broadened, and it should be given coordinating and management functions in economic development of the BAM zone.

A. Aganbegyan emphasized that completion of development of the comprehensive target program for economic development of the BAM zone taking into account the indicators of the 11th Five-Year Plan and preparation of practical steps for economic development of this region are pressing problems today.

The most important result of the conference was a set of uniform recommendations worked out and agreed upon by the participants for economic development and expansion of the production forces of the BAM zone in the future. A decision was made to hold the next, fourth all-Union science-practice conference in Khabarovsk in 1984 and to devote discussion there to experience with economic development of the BAM zone in order to outline the main challenges in this field and ways to meet them in the 12th Five-Year Plan and in the longer run until the year 2000.

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## RAILROAD

### PLANT INVOLVEMENT IN YEREVAN SUBWAY CONSTRUCTION DESCRIBED

Yerevan KOMMUNIST in Russian 10 Jun 82 p 1

[Interview with R. Armiryan, general director of the Armelektromash Production Association by KOMMUNIST correspondent A. Shkulev: "We Will Help the Construction Workers"]

[Text] In speaking at the April (1982) Plenum of the ACP [Armenian Communist Party] Central Committee, the General Director of the Armelektromash [Armenian Electrical Machinery] Production Association, R. Armiryan, made a proposal to organize effective sponsorship aid to the Yerevan Subway. This proposal merits the widest support. The KOMMUNIST correspondent A. Shkulev has asked R. Armiryan to tell what contribution can be made by the electrical machine builders to accelerating the construction of the subway.

[Answer] The large collective of our association places great hopes on the Yerevan Subway. The new line will run from Sasuntsi David Station to Spandaryan Square Station, that is, virtually to the entrance of our enterprise. For this reason we are very interested in carrying out the construction rapidly and completing it in the next few years. Certainly the surface urban transport which is greatly overloaded does not satisfy the needs of the workers at Armelektromash and the other enterprises in the Leninskiy Industrial Rayon.

I feel that we have an opportunity to help the subway builders sharply increase the pace of construction on the 4-km segment of the new subway line, one-third of which runs on the surface, along the Yerevan--Masis Railroad Mainline. Armelektromash has assumed the obligation to fill all orders to manufacture nonstandard electrical engineering equipment and to install this with its own forces. We are also ready to provide the required number of workers to carry out mechanical, welding and installation work on the subway line and to help in working out small local projects. The Komsomol members and youth have assumed sponsorship of the Spandaryan Square Station.

We have experience in professional sponsorship. Even in the period of building the first line of the Yerevan Subway, the collective of the head enterprise of our association, Armelektrozavod [Armenian Electrical Plant] imeni V. I. Lenin filled a major order for manufacturing the nonstandard electrical equipment. Using blueprints from the Armgiprotrans [Armenian Transport Design] Institute, a large number of control and power boards, signal boxes, electric panels, cabinets, cubicles, consoles and



drives was manufactured. This order was filled ahead of time and with good quality by the collective of the shop for nonstandard equipment (shop foreman, Al'bert Madoyan).

Some 30 experienced electricians were sent for installation work to build the subway and during the year they carried out complex and labor-intensive work to adjust and begin operating the manufactured equipment. Moreover, together with workers from the Armtransstroy [Armenian Transport Construction] Trust, we have disassembled an old railroad spur and built a new spur from Karmir-Blur Station to Armelektrozavod, with the laying of six tracks for maneuvering the trains.

Today we have close contact with the administration of the subway under construction. Upon its instructions, along the route of the subway, in the area of our enterprise, a plant fence is to be taken down, the territory is to be leveled and earthmoving carried out, and we will excavate 20,000 m<sup>3</sup> of earth on the subway's route. This is mutually advantageous to the subway builders and to the plant.

Each Yerevan enterprise possesses great opportunities for making a weighty contribution to speeding up the construction of the high-speed line. The economic leaders and party organizations, together with the client and the general contractor, must determine the specific positions of sponsorship help and clearly set tasks for all the city's industrial and construction workers.

The new construction project requires constant attention. Certainly, the completion of the new subway lines create favorable conditions for serving the Yerevan population with a high-speed and comfortable type of public transport.

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## RAILROAD

### BRIEFS

URENGOY RAIL LINE--A major achievement has been attained by the builders of the Surgut--Urengoy Railroad Mainline. The first worker train has arrived at the freight marshalling yard which is at the Urengoy Gas Condensate Deposit. [Text] [Moscow EKONOMICHESKAYA GAZETA in Russian No 2, May 82 p 3] 10272

SELEMDZHA RIVER BRIDGE--A major water barrier has been conquered by the builders of the BAM [Baykal-Amur Mainline]. They have completed ahead of time the assembly of a 700-meter railroad bridge across the Selemdzha River. [Text] [Moscow EKONOMICHESKAYA GAZETA in Russian No 18, Apr 82 p 3] 10272

WESTERN BAM SERVICE--The passenger train has left on its first trip between Kunderma and Krasnoyarsk. At present, the cities and settlements along the Western Section of the BAM are linked with the major transport connections in the center of Siberia. [Text] [Moscow EKONOMICHESKAYA GAZETA in Russian No 23, Jun 82 p 2] 10272

TYNDA TERMINAL PROBLEMS--The collective from the construction administration of Glavmosstroy [Main Moscow Construction Administration] in the town of Tynda is rightly among the pacesetters in the socialist competition among the collectives of Glavmosstroy. But during the current year we may end up "at the tail." We are building the town railroad terminal. Here the Mosproyekt [Moscow Design] Administration No 1 has designed a large number of metal structural elements. Even in 1980, our administration placed orders for their manufacturing at Glavmosmontazhspetsstroy [Main Moscow Administration for Installation and Special Construction]. However, Mosmetallokonstruktsiya [Moscow Association for Metal Structural Elements] and Mosremstroy mash [Moscow Administration for Repair and Construction Machinery] up to now have not begun the work. The reason is the required metal is not available. Glavmosmontazhspetsstroy turned to Mosproyekt No 1 with a request to replace this with available metal. But the designers refused the replacement. Thus it turns out that the design organization will not change the grade of metal, the manufacturing plants do not order the required metal and the elements are not made. The construction workers of our administration have long since completed all the necessary work but due to the lack of the metal structural elements work has come to a halt. The projects have had to be mothballed. [By Ye. Arzamasov, Section Chief of the Construction Administration of Glavmosstroy in Tynda] [Text] [Moscow MOSKOVSKAYA PRAVDA in Russian 3 Jun 82 p 2] 10272

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## OCEAN AND RIVER

### RSFSR MINISTER OF RIVER FLEET DISCUSSES IMPROVED RIVER TRANSPORT

Moscow SOVETSKAYA ROSSIYA in Russian 11 May 82 p 1

[Article by L. Bagrov, RSFSR minister of the River Fleet: "Under the Flag of Navigation. An Economic Survey"]

[Text] The flags of regular navigation flutter in the river expanses of Russia. The first caravans of vessels have sailed along the Volga, Kama, Belaya and Sukhona to the upper reaches of small rivers with cargoes of food, industrial wares and construction materials. Transportation of grain has begun from the southern regions of the country to the grain elevators along the Volga. Shipment of petroleum products is developing in Bashkiriya and in Kuybyshev Oblast. Along the blue highways, iron ore goes to Magnitogorsk and Cherepovets, coal goes to electric power stations in Moscow and in the Ukraine. During the current period of navigation, the workers of our fleet intend to transport no less than 3 million tons of various cargoes, over and above the task. In Western Siberian areas, the volume of work is increasing considerably--by 1.5 million tons.

Peculiar to this year are complex hydrologic conditions: a covering of ice was retained for a long time on many reservoirs and lakes. Nevertheless, with the aid of powerful ice breakers of the line, we are succeeding in organizing transit traffic of vessels on the main rivers of European Russia within the prescribed time period. The first whistles of diesel boats resounded at the roadsteads of Omsk, Krasnoyarsk and Tomsk. They proclaimed that Siberia's water highways are awakening for work. Navigation in the jubilee year is developing and picking up strength. The starting run must be reduced and the entire fleet must be put into operation somewhat more quickly. This is all the more important, since the first quarter's tasks for cargo transport were fulfilled only at the 93.6 percent level. By May, more than 3 million tons of cargo had accumulated at trans-shipment ports. The large river transport terminals at Gor'kiy, Yaroslavl', Kazan', Kuybyshev, Perm', Kotlas and Pechora were seriously "clogged with wares." That situation was no accident, it is repeated year after year. The problem is that there are a number of organizational and economic barriers to the efficient use of the river fleet.

As is well known, river transport is the least expensive type of transportation. Rivers are practically ready-made water routes. Maintaining them in

proper working order does not require a large amount of capital investments. The extensive network of blue main lines, with an overall length which has now reached 115,000 kilometers, has created a maneuvering expanse for operating large-capacity ships and vessels. Our crews expend a minimum of fuel and energy resources in transporting large-tonnage cargo. The net cost for delivering cargo on the rivers of the European part of the country is 1.5 times less than on the railroads. In Siberia and the Far East, river transport is 10 to 15 times less expensive than motor vehicle transport. Most advantageous for the national economy is operating ships of combined "river-sea" navigation. For example, after lumber is received in Karelia, our fleet delivers the cargo, without transshipment, directly to piers in the ports of the FRG. Due to such express voyages, the state gains as much as R20 million per year, just in export operations.

Or let's take the delivery of pulpwoods from points on the White Sea to the Baltic area. Each year, in close cooperation with the USSR Ministry of the Timber, Pulp and Paper and Wood Processing Industry, we develop and implement measures to increase the volumes and improve the technology for river transport of raw materials for the paper and pulp enterprises of Kaliningrad and Klavpeda. Today no one doubts any longer that it is more advantageous to deliver timber, which has been felled in Arkhangel'skaya Oblast, to the paper industry workers of the Baltic via ships during the navigation period. For, in so doing, the rail car passage is reduced by 2,000 kilometers. We were assigned the task of increasing the volume of pulpwood transport in this direction by 1.8 times by the end of the 5-year plan, compared with 1980. The river fleet workers, in cooperation with workers at enterprises of the USSR Ministry of the Timber, Pulp and Paper and Wood Processing Industry, are doing everything to successfully resolve this task. We could cite many examples when we cooperated with union and republic-level departments in overcoming difficulties connected with transport handling one or another freight traffic flow.

And yet, in our view, the advantages of river transport are still not being fully utilized. We are very disturbed by the excessive idleness of ships in river ports and at departmental piers. Taking into consideration the complex situation in transport, the attitude towards reducing the time needed to process ships should be the same as for railroad rolling stock. At present, we have cargo diesel boats whose average cargo-carrying capacity is 1,586 tons, plus non-self-propelled barges with an average capacity of 1,310 tons. These are quantitatively equal, respectively, to 26 and 21 freight cars. And what is especially disturbing is that idleness is becoming ever more appreciable. The fact is that transportation potential is being restrained by development of pier facilities. It would seem that construction and development of transshipment complexes should be accelerated. However, that is not happening. For example, the USSR Ministry of the Construction Materials Industry, despite extreme necessity, is not allocating funds for rebuilding and constructing transshipment complexes at Vol'sk, Voskresensk, Zhigulevsk, Pervomaysk and Kasimov. The USSR Ministry of Non-ferrous Metallurgy is not proceeding with construction of facilities at Khandyga and Kular (Yakutsk ASSR). The USSR Gosnab is postponing work at Kalinin and El'dakan (Yakutsk ASSR). The USSR Ministry of Power and

Electrification is not constructing piers at Volzhskiy, Balakovo and Volgograd. During the 5-year plan, the union and republic-level ministries are supposed to build mechanized river piers with an overall length of 12.5 kilometers, at 59 points for their own enterprises. But, at present, only 1.8 kilometers have gone into operation. Thus, the causes of cargo ship idleness remain. What is this leading to?

At one time, a decision was made about delivering iron ore concentrate from the Kovdor and Olenegorsk fields (in the Kola peninsula) to the Cherepovets Metallurgical Plant, not only in freight cars but also in special-purpose river vessels. The railroads could not handle the sharply increased volume of transport for this cargo. But the Volga-Baltic water route was next to the steel rails, literally parallel to them. Computations showed that the blue main line could relieve the railroads of about 2 million tons of concentrate. But the computations remained on paper only. At present, less than half the volume of concentrate, planned earlier, is being transported in the holds of river diesel boats. The problem is that the USSR Ministry of Ferrous Metallurgy has not built, in 10 years, the second phase of the Cherepovets industrial port.

In our view, this situation is explained by the fact that the system for planning transportation expenditures does not encourage the enterprises located near water routes to use the services of river transport. Let's say that the directors of the Balakovo Chemical Plant know that delivering apatite in freight cars costs 3 rubles more than in a diesel boat. Nonetheless, they stubbornly continue to receive raw materials only by rail.

Frequently, planning and supply organs, while making decisions about improving the efficiency of transport, do not keep an eye on the implementation of their directives. For example, last year the USSR Gosplan and the USSR Gossnab planned for the delivery, via water, of 5.3 million tons of coal from the Kuznetskiy and Karaganda fields, plus 1.4 million tons of iron pyrite from the Urals. However, the Soyuzglavugol' [Main Administration for the Supply and Sale of Coal, subordinate to the USSR Gossnab] and the USSR Ministry of Nonferrous Metallurgy did not carry out the established tasks. Who suffered from this in the end? It was the national economy and river transport, in particular, which suffered. For example, the Kama River Steamship Company in whose vessels it was planned to deliver coal and pyrite, underfulfilled the cargo traffic plan by 8 percent. The workers fell into the ranks of the laggards and considerably reduced their incentive funds. And what about the freight owners--Soyuzglavugol' and the USSR Ministry of Nonferrous Metallurgy? The failure to carry out the assigned tasks had had no impact at all on their economic condition. The existing order does not require a reduction of transport expenditures. These expenditures are included in plans beforehand. If transport of cargo had an effect on the unit cost of output, and thus, on profits and incentive funds, then the directors of enterprises, while striving to economize on transport expenditures, would finally consider river transport and would be more interesting in building piers.



It seems to us that the USSR Gosplan and the USSR Gosnab should study our proposals and establish economic pre-conditions in favor of river transport--transport which is advantageous to our country.

The river fleet of the RSFSR is a component of the country's unified transport system. Water routes should be utilized more productively. But here is what is demonstrated in practice. River transport does not yet fully meet the needs of the national economy in the areas of Siberia, the Far North and the Far East. But, on the other hand, our capabilities are being underutilized in the coal fields of the European part of the USSR. In 1973, at our ministry's order, a highly mechanized automatic port for reloading pyrites from railroad onto river transport was built in Medvezh'egorsk. Establishment of this complex provided for unloading the steel main lines and making efficient use of the V. I. Lenin Volga-Baltic Water Route. Simultaneously, construction of permanent piers for receiving pyrites (from water transport onto railroad) was planned at terminal points: Perm', Cherepovets and Astrakhan'.

How is the work going today? New structures have appeared in Perm' and Cherepovets. But in Astrakhan', the situation up to now is cause for alarm. The industrial plants introduced there are practically standing idle. As a result, the mechanized complexes in Medvezh'egorsk are not providing the required output. Apatites continue to arrive in Sumgait and other terminal points not by water, but by railroad. Yet, each "Volgo-Don" type diesel boat (with a load capacity of 5,000 tons), working to transport this output, could free about 1,000 freight cars.

Why has it happened this way? Because the Ministry of Railways does not provide the quantity of cars, required by the plan, to the piers. And this is a typical case. Year after year, it is the rail workers' fault that from six to 7 million tons of cargo--coal, ore, lumber, salt, pyrite--get stuck at secondary transshipment points. During four months, we did not receive 64,000 cars from the Ministry of Railways. As a result, the piers are turning into storage areas and cargo is arriving late to consumers, which seriously undermines the basis of combined rail-water transport. At the same time, the scientists of the transport branch substantiated the economic expediency of transferring more than 36 million tons of cargo from rail to river transport. This will enable 4,000 cars and tank cars to be freed each day from loading operations, and for the entire navigation period, 112.5 million can be saved.

Uncoordinated work at junctions is mainly explained by the fact that various types of transportation have differing rules and conditions for transport, plus differing methods of economic stimulation, which do not properly further the attainment of the main goal--uninterrupted movement of cargo. It is for just this reason that the well-known decree about improving the economic mechanism made a special note that a parochial approach to development of plans is unacceptable. One conclusion can be drawn from this: conditions must be created such that the work of transport employees will be directed towards increasing the efficiency of the entire national economy.



The first to create such conditions, on the level of socialist competition, were the Leningrad Transport Junction workers. They included in their obligations unified indicators for everyone and unified forms for accounting and reporting. It is no accident that a high degree of coordinate work was achieved at this junction: idle time was reduced for freight cars, ships and motor vehicles; freight is being delivered more quickly to consumers. The more workers follow the example of the Leningrad workers, the more quickly will obstacles at junctions vanish. Introducing a single schedule-plan for everyone will create conditions in which a high degree of efficiency in the functioning of the country's transportation complex can be attained.

"Navigation-82" is gathering strength. During the period which has passed since the day when the flag of large navigation was raised, the RSFSR river transport workers have shipped about 40 million tons of cargo. Reports about labor achievements are arriving from many basins. The initiator of the socialist competition, the Western Siberian Steamship Line, fulfilled the April plan ahead of schedule. Nor are the river transport workers of the Amur, Kuban, White Sea-Onega, Northwestern steamship lines lagging behind the advanced workers. A good start is reinforcing our confidence that the tasks assigned to the branch for current navigation be successfully carried out.

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## OCEAN AND RIVER

### TRANSPORT PROBLEMS IN IMPLEMENTING FOOD PROGRAM REVIEWED

#### Role of Transport in Food Program

Moscow VODNYY TRANSPORT in Russian 17 Jun 82 p 1

[Editorial: "Transport Support for the Food Program"]

[Excerpt] The decisions of the May (1982) Plenum of the CPSU Central Committee have been greeted with strong approval by the nation's water transport and fishery workers. With great attention and a feeling of profound gratitude to the CPSU for concern about increasing the prosperity of the people, the sailors, river workers and fishermen are discussing the USSR Food Program and the decrees adopted in the aim of implementing it by the CPSU Central Committee and USSR Council of Ministers.

In terms of their scale, the measures outlined by the party should ensure not only a sharp rise in agriculture but also a substantial increase in the standard of living of all the Soviet people and a significant improvement in the state of the entire national economy. The implementation of this scientifically based comprehensive program is a nationwide concern but it primarily involves the participants in the production, delivery, processing and sale of products from the land, the seas, rivers and lakes. This is why the sea and river workers are thoroughly examining the tasks posed by the Food Program for the transport and fishery workers and are outlining measures to increase the transport volume and the delivery quality of freight for the countryside and agricultural products, to increase the output of fish and sea products, to develop in every possible way the subsidiary farms, collective and individual orchard and garden raising and to increase the level of trade services for the water transport workers and fishermen.

One of the most important tasks in the Food Program is the transport support for the agroindustrial complex. Over the next decade there is to be a great increase in water shipments (particularly river) for the field and farm product. Moreover, the measures to strengthen the economy and to improve the living, communal, household and sociocultural conditions of country life will sharply increase the delivery volumes for farm equipment, fuel, fertilizers, combined feeds, building materials and industrial goods.

At the same time there are plans for the requisite strengthening of the physical plant of the maritime and river fleet as well as the fishery enterprises. The river workers should deliver a significant portion of the fruit and melon crops from the Astrakhan' "garden" to more than 40 industrial centers. For these shipments

they plan to increase the capacity of the pier facilities and to build a specialized fleet and storage areas. Specialized facilities for transshipping food cargo are being built in the ports of the Baltic, the Black Sea and Far East. The delivery volume of special-packaged tomatoes, watermelons and potatoes will be increased. The fleet will be added to for transporting fish to the ports from the fishing grounds.

### Better Handling of Food Cargo

Moscow VODNYY TRANSPORT in Russian 17 Jun 82 p 1

[Unattributed article: "At the Board of the USSR Ministry of Maritime Fleet and the Presidium of the Central Committee of the Trade Union for Maritime and River Fleet Workers"]

[Text] The maritime transport workers are successfully carrying out the socialist obligations to transport and transship national economic and foreign trade cargo, primarily food, at the ports. Thus, the plan for the 5 months of 1982 was fulfilled by 103.7 percent for coastal shipping, by 102.6 percent for overseas shipping and by 107.2 percent for cargo handling in the ports. In May the highest indicators were achieved for the dispatching of food cargo from the ports into the interior of the nation. At the same time the vessel schedules are sometimes disrupted and imported food cargo is permitted to accumulate in the ports awaiting dispatch.

At a joint session of the board of the MMF [Ministry of Maritime Fleet] and the Presidium of the Trade Union Central Committee it was pointed out that the maritime transport workers approve and support the decisions of the May (1982) Plenum of the CPSU Central Committee. Measures have been worked out and approved to carry out the USSR Food Program for the period up to 1990. The MMF Board and the Presidium of the Trade Union Central Committee have obliged the leaders of the subdivisions at the center and on the spot to make a detailed study of the activities of the enterprises and organizations involved in the transport support for the agroindustrial complex and even in 1982 to work out and implement the necessary measures to improve this work.

Among these measures is the complete and prompt providing of transport for all food and other agricultural freight, the satisfying of the requirements of foreign trade for transporting imported foodstuffs on Soviet and foreign vessels as well as other cargo of the agroindustrial complex, and the creation and expansion of the existing subsidiary farms over the long run up to 1990.

The session approved the plans to build projects helping to carry out the USSR Food Program in 1982-1985. These include transshipping installations in the ports, vegetable and fruit storage facilities, warehouses of Torgmorts [? Trade and Maritime Transport Trust], refrigeration capacity, pig sties and hothouses. It has been proposed that the State Self-Financing Association, the navigation companies and ports ensure the immediate dispatch of all foodstuffs located at the port warehouses and strengthen control over the handling of agricultural freight. For this, these questions should be reviewed at daily dispatcher meetings and sessions of the coordination councils in the transport centers.

The MMF Board and the Presidium of the Trade Union Central Committee expressed confidence that the workers of the sector would develop a socialist competition to carry out the USSR Food Program as well as to fulfill and overfulfill the plans and obligations adopted in honor of the 60th anniversary of the formation of the USSR.

### Rail Delays of Fertilizer Shipments

Moscow VODNYI TRANSPORT in Russian 17 Jun 82 p 1

[Article by V. Zubkov, chief of the transshipping area of the Astrakhan' Port; N. Buravov, party bureau secretary; N. Makarenkov, Chairman of the Ship Trade Union Committee; N. Belkin, captain of "Volgo-Don-5011"; V. Sharutin, captain of "Volgo-Don-5044": "Delay Cannot Be Tolerated"]

[Text] Due to the fault of individual workers from the Azerbaijan and Volga railroads, a critical situation has developed in the Astrakhan' Port which transships apatite concentrate from ships to railway cars. This is a raw material for producing fertilizer and is delivered by water from the Kola Peninsula. The storage capacity of the apatite pier is full to the limit and large-tonnage vessels are hopelessly standing idle while waiting to unload.

This has happened because the railway workers do not supply the port with the promised rolling stock. In February of this year, at an interdepartmental conference, representatives from the Ministry of the River Fleet and Ministry of Railroads agreed upon a transport system for shipping the apatite out of Astrakhan'. The recipient, the Sumgait Superphosphate Plant was designated. The chief of the Baku division of the Azerbaijan Railroad, Comrade Shikheyev, was instructed to assign two block trains each consisting of 35 apatite-carrying cars. For the sake of justice, let us point out that the Baku workers whom we informed at the beginning of May about the arrival of the first vessels with the concentrate, immediately dispatched two block trains to the port. We tried to process the first block train in a few hours, but then the unforeseen happened. The cargo fell out of two apatite cars in which the bottom hatches had spontaneously opened and thus the transshipping came to a halt. The Astrakhan' division of the Volga Railroad investigated this case. The commission consisting of the chief of the car section V. Gornov, the chief of the car depot A. Fedin and others established the malfunctioning of the cars. To avoid a second accident, on eight of the apatite cars, the lower hatches were even welded shut.

In examining the rolling stock in the second block train, the railroad workers judged only 25 out of the 35 as fit to load. No sooner said than one of the apatite cars opened up underway. Of the 32 cars in the third block train, V. Gornov rejected 24. It turns out that the specialized cars arrive in Astrakhan' basically to return empty after standing idle for a little time on the sidings. On 10 June, we were able to load only 70 cars. At the same time, according to the plan the railway workers had promised to supply more than 650 apatite cars for transloading. The quota of the second quarter was in jeopardy.

"It is not our problem," asserted the same V. Gornov. "The Baku workers are to blame as they send not railway cars but junk."

Recently, upon the instructions of its leadership, the Volga Railroad formed its own block train. An incident developed. V. Gornov recognized only 12 of the apatite cars out of the 35 as in proper working order.

We feel that this is caused by the fact that the railroad workers, in spite of logic and contrary to the interests of the national economy, are disinterested in developing combined water-rail shipments of the Kola apatite. It apparently has not occurred to them that Astrakhan' has built a transshipping complex equipped with the most modern and in part special-made equipment with one purpose, lifting a weighty part of the load from rail transport and freeing the cars from irrational shipments which parallel the water ones.

At present, when all the Soviet people who strongly support the historic decisions of the May Plenum of the CPSU Central Committee have begun to carry out the Food Program, a delay in the freight destined for agricultural needs can in no way be justified. We are hopeful that the USSR Ministry of Railroads will properly view our profound concern and be able to put an end to this flagrant mismanagement.

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## OCEAN AND RIVER

### EARLY START OF GRAIN SHIPPING NOTED

Moscow VODNYI TRANSPORT in Russian 1 Jun 82 p 2

[Article by VODNYI TRANSPORT Correspondent A. Cheprasov: "Grain Cannot Wait"]

[Text] In each rayon, in each oblast, in each republic a clear system of measures should be conceived and implemented to combat losses and provide uninterrupted operation of the procurement, transport and trade organizations.

L. I. Brezhnev

This year, grain shipments have started unusually early along the waterways of the central basins. Food grain and fodder must be transported as quickly as possible from the storage facilities in the south to the central regions of the nation, to the northwest, to the Volga and Kama areas. This will support the rear and provide freedom of maneuver for the grain growers and procurement workers of the Kuban', the Lower Volga, Don and Crimea during the harvest period.

The river workers have begun to carry out the responsible task with a full awareness of their duty. Well prepared vessels were sent on time to the piers of the southern regions. The navigation companies and riverports have provided the procurement workers with timely information on the arrival of empty and loaded tonnage and have provided help in organizing cargo handling.

The Kuybyshev Water Transport Center has long held one of the leading places for grain transshipping on the "main street of Russia" [the Volga]. A great deal depends upon how things go on here.

Unfortunately, the first attempt was unsuccessful. While the "Volga-Don-235" unloaded according to schedule, the "Chkalovsk" failed. Instead of 35 hours according to the standard, the combined feed plant held up the 2,000-vessel at its pier for nearly 2 days. There were no workers to unload, so it was impossible to direct and reset the intake hoses of the receiver.

The failure at the outset, alas, was not an exception. Large-tonnage vessels stood idle beside the pier of the combined feed plant above the norm in both April and May. The measures to improve the organization of the receiving of feed from the water were undertaken by the procurement workers only at the end of May. The situation is better in unloading the feed grain being delivered by the river workers at



the Mill No 2. Of the diesel vessels processed over April and May, only one was delayed. On the other hand, the delay was a record one by local standards. The 2,000-ton vessel "Konotop" lost almost 24 hours as a result.

As is known by the decision of the CPSU Central Committee and the USSR Council of Ministers on the development of river transport in the 11th Five-Year Plan, the productivity of each of the grain piers on the inland waterways should rise to 3,500 tons a day. At present this indicator for the two mentioned enterprises does not reach even one-half of the planned level. Nevertheless, there still has been no more or less serious discussion of the reconstruction of their piers although the equipment for unloading grain from the vessels here is extremely worn out. Many units require immediate replacement.

For carrying out the Food Program, a very important condition is to ensure the best utilization of the nation's waterways in the aim of delivering food and feed grain to the processing and construction points. But here success depends not only upon the river workers. The procurement workers must also have their say. At the same time, they permit breakdowns in their work not only in Kuybyshev.

"In accord with the instructions of the Ministry of the River Fleet," said the chief dispatcher of the Volga Joint Navigation Company A. Okladnov, "scores of large-tonnage vessels should be sent ahead of time from the Volga to the ports of the Don and the Azov Sea. The joint measures worked out by the river workers and procurement workers make provision for the conditions needed to operate the grain conveyor from the first days of the navigation season without interruptions and clearly. Still the piers of the elevators, the mills and combined feed enterprises still too often let us down.

Alerts about bad conditions have also been received from Saratov, Kineshma, Rybinsk and other Volga cities.

On the grain piers of the Volga, due to the fault of their owners, preventive repairs on equipment are still carried out poorly and off schedule. At the same Kuybyshev Grain Enterprises, and particularly at the combined feed plants, a significant portion of the equipment failures is explained by the insufficiently skilled maintenance.

Great miscalculations have been made from the very outset in the allocation of the batches of water-transported grain to the unloading points. Lines of grain-laden vessels awaiting a pier have become the inevitable consequence.

Such a situation, in particular, may arise in the very near future in Kuybyshev. At present, four large-tonnage vessels are traveling here from the southern ports with minimum time intervals between them. Consequently, in the next few days things will be very tense at the pier of Mill No 2, although the pier has been empty since the middle of May.

As is seen, the USSR Ministry of Procurement does not intend to give up its habit of thoughtlessly sending clusters of vessels to the same destinations. This happens while, for example, the piers are often empty in Kazan' and Gor'kiy.

The first weeks of grain shipments along the Volga and other rivers of the Central Basin lead one to sad reflections. The summer, the time of the major grain harvest, is not far off. It deals harshly with the negligence for every mistake.

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## OCEAN AND RIVER

### PROBLEM AT PORT OF KLAYPEDA

Moscow VODNYI TRANSPORT in Russian 22 Apr 82 p 2

[Article by VODNYI TRANSPORT Special Correspondents S. Borik and S. Parshikov from Klaypeda, with opening remarks by A. Kuznetsov, deputy chief of the Klaypeda Sea Port: "A Package at an Impasse. Delay is Unacceptable."]

[Text] Recently, transport of bag cargo in sling packages has been widely used. It is not necessary to explain their advantages, which are an increase in labor productivity, comprehensive mechanization of transshipment and improved safekeeping of cargo. Many port workers have experienced and evaluated the merits of reliable packing.

Unfortunately, not all the advantages of this kind of packing are being utilized. For example, errors are tolerated when the packages are put together and as a result, they fall apart. One of the causes of these shortcomings is the fact that sometimes these operations are carried out without proper monitoring. Thus, it became known from the captain of the West German ship ("Vokinetz"), delivering sugar to the port of Klaypeda last December in sling packages from the Dutch port (Lashing), that the packages were put together and loaded by a stevedore company which specializes in handling coal and steel. Thus, despite all the efforts of the captain during the operations, part of the packages were loaded on the ship in a collapsed condition. Therefore the overseas representative of the Ministry of the Maritime Fleet must be more intent about looking after the assembling and reliable packing of packages heading for Soviet ports.

However, packaging troubles did not end with that. The main difficulty arises when it is time to hand over the packages to the railroad. According to the rules, a package should have the cargo dispatcher's control markings (seals), so as not to allow removal of individual cargo from a package. But such a package does not meet these

requirements. Therefore, the railroad workers do not want to consider such a package as separate cargo.

When the occasion arises, they can rightfully demand to have the sling package broken open prior to loading on the freight car, to make sure that all the cargo is intact and secure.

In fairness' sake, we should note that railroad workers do not always demand to have the package broken open. That depends on many factors--on the availability of freight cars, the mood of a shipping clerk, etc.

So that sling packages will come into wide use, the Ministry of the Maritime Fleet must coordinate, as soon as possible, technical and commercial specifications with the Ministry of Railways, for transporting sling packages. This is very important, since a large number of cargoes are now being transported in sling packages.

[Signed] A. Kuznetsov, deputy chief of the Klaypeda Sea Port.

The deputy chief of the Port of Klaypeda has raised an important and topical problem. When the first diesel boats delivered sling packages to Soviet ports, it wasn't necessary to convince the dock workers of their advantages. The workers immediately sensed and were convinced in practice that this method of transporting and transshipping cargo was advantageous. This method totally eliminates manual labor and allows one to increase labor productivity, reduce the need for manpower and reduce the time needed to process vessels. For example, at the beginning of this year, two diesel boats, the "Suren Spandaryan" and the "Denas" had delivered sling packages and were being processed at the Zhdanov Sea Port. Transfer of the cargo from both vessels to rail cars was accomplished with a 100 percent level of integrated mechanization. The diesel boats headed out for their next sailing well ahead of schedule.

However, despite the success which has been achieved and the obvious advantage of using a sling package, not all the problems with this type of package have been resolved.

At the end of last year, one of us was at the ports of Antwerp, Rotterdam and other ports, where he familiarized himself with the technology of transshipping sling packages. At those ports, the stevedore company "Allied Stevedore" put the sling packages together. The quality of the packing work was basically satisfactory for the demands of accelerated processing of the fleet in ports of debarkation. But it was already clear that a system for monitoring the quality of making up packages had to be worked out. Also, it is necessary to designate the parties responsible for the monitoring function and establish sanctions for non-observance of the production process. Unfortunately, this has not been done so far.

Thus, on 22 March, the diesel boat ("Vielen") arrived at the port of Klaypeda from Rouen. The ship had been loaded by the stevedore company "Charles Lebernet Roudy". As shown by the documents, it was discovered during unloading that about 70 percent of the sling packages were improperly tied up. Major deviations from the production process led to a sharp increase in use of manpower, a considerable reduction in the tempo for ship processing and large losses of assets.

Within 3 days, on 25 March, a second diesel boat, the ("Vela") arrived from Rouen, loaded by the same stevedore company. This time, all the requirements of the production process had been observed. So, can one still strive so that the packages are put together as required?

A few days ago, Yu. Drobinin, Chief of the Container and Package Administration of the Ministry of the Maritime Fleet, received a routine radiogram from the Leningrad Sea Port. In particular, the radiogram reported that sling packages delivered to the port do not meet the established requirements. The consigners are not observing the rules for making the packages in accord with the documentation which has been developed. The packages were tied with a simple twist of a loop or a slip knot, but this does not assure the main thing--the self-sealing nature of the package. As a result, when the ship is unloaded, every second package falls apart and a very critical situation arises when it becomes necessary to transfer a package by fork-lift truck to a rail car.

Yuriy Pavlovich says that "this is not an isolated instance; alarming reports are arriving from the ports of Novorossiysk, Zhdanov, Izmail, Riga and Klaypeda about packages arriving which deviate considerably from established technical norms. In a number of cases, this necessitates that the packages be broken up."

As an inspection showed, uncoordinated action by a state self-supporting association is one of the reasons for this situation. For example, "Yuzhflot" [Use of the Fleet and Ports of the Southern Basin Administration] sent a telegram to the foreign company "Allied Stevedores" with an order to manufacture slings and specified incorrect sizes for the slings. This was done in violation of the established procedure and without coordinating with the Container and Package Transport Administration. The company filled the order and shipped 30,000 slings to the designated ports.

Later, an experimental loading of packages onto the diesel boat "Serebryansk" was set up at the Indian port of Kandla. However, when the ship arrived at the port of Riga in February of this year, it turned out that the sizes of the packages were not compatible with the rail cars, either by height or length. In addition, it became clear that due to the improper packing, the packages had arrived in an untransportable condition.

A special commission, consisting of representatives of the Baltic Sea, Baltic and Latvian Steamship Companies, the BTsPKB [Baltic Central Planning and Design Bureau] and the ports of Il'ichevsk and Riga had observed the processing of the "Serebryansk" and later made an insistent recommendation that the

height of packages be reduced and that the method of packing the bags be changed. A corresponding document about this was drawn up on 18 Feb 82.

"But despite that," adds Yu. Drobinin, "and also contrary to a directive of deputy minister A. Goldobenko, "Yuzhflot" again ordered the Ministry of the Maritime Fleet's representative in Bombay to continue to ship packages using the old method. As a result, a critical situation developed with transshipment of packages at ports. Also, the possibility of using the 30,000 slings was jeopardized."

Yes, now one can see the following scene at the ports where non-standard packages arrive. Dock workers break up the packages manually in the cargo holds, transfer the bags to pallets and then on the pier, also manually, they load the bags into rail cars.

But non-standard slings are not the only causes for breaking up packages. There are cases, about which A. Kuznetsov justly writes, when a representative of the railroad demands that a tightly packed package be broken up. And this is done for a single purpose: to check if everything in the package is intact and secure. As the railroad workers themselves say, they must know if the cargo in the package corresponds to what is indicated on the receipt. There are rules in the Ministry of Railways about transporting freight, which A. Kuznetsov also mentions.

According to these rules, each package must have control markings in the form of sealing tape with a locking device of shrinkage film. Such control markings are only on packages which were put together in cargo holds. Sling packages don't have them. However, the synthetic cargo tapes on sling packages completely replace control markings which serve as seals. On 4 Feb 82, A. Goldobenko, deputy minister of the maritime fleet, sent a request to V. Gin'ko, deputy minister of railways, to order the railroad representatives not to break up sling packages, since removal of cargo from such a package can only be done by cutting the knot. In other words, you can't make a sling package anew from the same tape. Unfortunately, there has still not been any answer from V. Gin'ko. Thus, the deputy chief of the port of Klaypeda correctly raises the issue that it is high time that the two ministries--railways and maritime fleet--coordinate their actions and further develop the presently existing rules.

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## OCEAN AND RIVER

### REPAIR OF BARGE CARRIER DESCRIBED

Moscow VODNYI TRANSPORT in Russian 1 May 82 p 4

[Article by V. Nevmytyy from Il'ichevsk: "The 'Tibor Samueli' Has Been Launched"]

[Text] In the chronicle of the 50th Anniversary of the USSR Ship Repair Plant in Il'ichevsk yet another glorious page has been written: "April 1982. Repair of the barge carrier 'Tibor Samueli.' The first time such a repair has been carried out in the fatherland."

The barge carrier "Tibor Samueli," bearing the name of a glorious son of the Hungarian Communist Party, was built 2 years ago in Finland at the "Walmet") Shipyard. This vessel serves on an international transport line: "Ust'-Dunaysk--Karachi--Bombay--Ust'-Dunaysk. The 26 barges which were conveyed on the 3 decks of the gigantic vessel are towed up the Danube to Bulgaria, Hungary and Czechoslovakia, while the barge carrier again sets out on a sea cruise.

The "Tibor Samueli" had successfully completed a routine voyage when suddenly a defect in the sealing of the left deadwood was discovered. Un-scheduled maintenance was required. But where could it be done? Passage to the repair base in Singapore would have taken 2 weeks. Then the management of the Danubian Steamship Company made a different decision and within 6 hours, the ship had tied up to the pier at the Il'ichevsk plant.

Yu. Solov'yev, captain of the "Tibor Samueli," tells that "coming out of Ust'-Dunaysk, we knew that the ship repair workers at Il'ichevsk were preparing to receive our ship. And yet, the crew was still excited. For the first time in the fatherland, the docking of the gigantic barge carrier had been planned."

At the same time, a design group headed by E. Ol'shanskiy, chief of the design bureau, began working out the docking plan. There were many problems. First of all, the ship was 20 meters longer than the dock floor. Secondly, the stern catamaran's center of gravity was 6 meters higher than the ship's base plane. Tall columns had to be installed to take some of the load upon

themselves. The designers had to make ten versions of the docking plan; then with the help of a computer, they determined the optimal plan.

The hull workers and welders from the Communist Labor Brigades of V. Kolonifa, N. Pasichnik, V. Sobol' and V. Krasnyashchikh reinforced the dock floor.

The moment of readiness coincided with the arrival of the ship at the plant. The docking began under the direction of dock master V. Shamray. The dock weight of the ship is 32,000 tons and its sail capacity is 7,500m<sup>2</sup>. When the 277 keel-blocks and the 6 high stern supports caught the giant ship, it turned out that the deviation from the docking plan totalled only 50 millimeters.

And the repair itself merited the highest evaluation. At first it was proposed to remove the shaft, but that would have taken 10 days. The ship repairmen preferred a new repair process: cut out the rings one at a time, repair them and then connect them on the shaft. The innovators were not disturbed by the fact that the plant did not have special glue. They made an inquiry with the Dutch firm ("Lieps"), which was building a propeller-rudder unit. J. Biumer, the firm's representative, quickly arrived in Il'ichevsk. The operation was performed in a few hours.

Soon the barge carrier, which towered over the side walls of the dock, was launched and sailed out to sea.

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CONGESTION IN VOLGA-CASPIAN CANAL REPORTED

Moscow VODNYI TRANSPORT in Russian 6 May 82 p 2

[Article by V. Meshalkin "Congestion in the Canal"]

[Text] The Volga-Caspian Canal is the longest navigable canal of natural origin in our country, an extremely busy transport mainline during the navigation season that guarantees communication between the Volga River and Caspian Sea. The Caspian Roadstead Administration of Marine Waterways services it. There are a little more than 200 water kilometers on its course, including both the river and marine part.

The Volga-Caspian Canal always required constant maintenance but even greater efforts to maintain navigation in it were required in recent years. The most unfavorable consequences of a sharp change of the hydrological regime, caused on the one hand by artificial regulation of the Lower Volga River and on the other hand by the Caspian Sea becoming more shallow, have become even more noticeable. Moreover, a new large-capacity fleet which the previous dimensions of the route no longer accommodate, has emerged on its channel.

Thus a problem occurred. And initially it seemed that it could be overcome without special delays. As early as 1975, the Astrakhan' Complex Planning and Survey Department, Kaspromniiprojekt Institute [expansion unknown] worked out an optimum version of dredging operations. The Rostov TsPKB [Central Planning and Design Office] of Morflot [Maritime Fleet], having confirmed and refined the concepts of their Astrakhan' colleagues and taking into account the capabilities of Kaspreydmorput' [expansion unknown] proposed a specific program to supplement its fleet with the necessary equipment. The planners were guided in their developments by the new overall dimensions of the canal confirmed by the Ministry of the Maritime Fleet : width of ship course of 130 meters and depth not less than 5.6 meters.

However, the canal workers did not receive the equipment. Only toward the end of the navigation season is it possible to dredge the channel to a width of 100 meters and to guarantee a depth up to 4.9 meters. And it is even worse in the spring. The fleet travels along the canal with considerable underloading. The transport losses comprise no less than one million rubles during the navigation season. In this case navigation in the channel is unsafe according to the general opinion of the pilots

Everyone says that it is time for the Volga-Caspian Canal to become fully and seriously involved. This was discussed in the articles "Shallow waters in the channel" and "How to assist the Volga-Caspian Canal," published in the edition of 11 January 1979 and 30 May 1981. What has changed?

They note with satisfaction at Kaspreydmorput' that, beginning with the 1979 navigation system, funds for capital repair were allocated for the first time to the administration. The canal workers assimilated two million rubles during three years and removed an additional 1,500,000 cubic meters of soil. They could have done even more but their limited capabilities could not be organized. But even so, the first positive results began to finally be achieved during the maintenance that was generally far from necessary. The chief of service Z. Stoyanova stated:

"If we had not done this, the canal would simply have been in a poor state. But now for the first time in its history we are opening the navigation system, at guaranteed depths of 4.5 meters, which is 30 centimeters greater than usual."

A change has really been noted. Although it must be noted that the Caspian Sea itself, which has begun to fill up somewhat over the past 2-3 years, assisted the canal workers. However, as before it is very difficult with the equipment. The dredger of the pre-Revolutionary construction project Sormovo has worn out. The Ural-1 and Ural-2 dredges have also become worn out. But a replacement? The canal workers for the time being have received only a small-capacity single-bucket grab dredger, which as was determined, is unsuitable for use in the canal.

They were unable at Kaspreydmorput' to get along with the existing equipment. The canal workers opened the navigation system, counting on only one multi-bucket Bakhtemir dredge in the canal. The more productive "Inzhener Agashin" was needed as early as April, but the deadline for finishing the repair was determined for 15 June. There is no reason to hope for the powerful dredge 50 Years of Soviet Azerbaijan, departure of which has been designated for the last days of May. The Plant imeni 10th Anniversary of the October Revolution is not helping the canal workers. The enterprises is clearly not coping with preparation of the dredging fleet for the navigation season. And although a stable base has begun to be developed here during the past few years, the plant does not have the capacities.

The deadlines for completion of equipment preparation are determined at Kaspreydmorput' on the basis of production needs. The plant reviews them here and postpones them to a later time. The Caspian Maritime Shipping Company emerges in the role of a court of arbitration. They try to smooth out the contradictions here with a field decision and confirm the directive schedule. But its deadlines are nonobligatory with rare exceptions. Everything is returned to their own circles--the plant delays the fleet in repairs.

Removal of the dredges for so-called outside work seriously weakens the position of the canal workers in the canal. The total volume of dredging toward which Kaspreydmorput' has been oriented by the shipping company this year is 5,130,000 cubic meters of soil. It is planned to remove 3,644,000 cubic meters of the soil in the canal, while the canal workers are forced to remove 1,586,000

cubic meters, insufficient prior to the plan, concluding an agreement with outside organizations. There is no other way to fulfill the task in profits, since dredging operations on the side, outside the canal, are disadvantageous in monetary terms.

Actually, the expenses of the shipping company to maintain the route equipment are now high. The desire of the Caspian workers to facilitate this time would be understandable. However, how will the canal be if the transport delays cost more? After all, such planning of dredging operations becomes a closed problem from which there is no way out.

And one cannot help but listen to the opinion of Hero of Socialist Labor, Chief of Kaspreydmorput' P. Sablin:

"Prior to this year, the shipping company did not place such rigid requirements on us to achieve a profit for several years. We felt an easing and became more concerned with the canal. But now we return to the old way--the profit plan has been increased almost twofold."

And even now the canal workers look more confidently into the future than before. The shipping company recently reported some pleasant news to Kaspreydmorput' -- the plan to deliver a technical fleet for the current five-year plan became known. The canal workers are supposed to receive two multibucket dredges, two scows and a self-hauling dredge. A powerful reinforcement is expected and undoubtedly changes for the better will be noted.

However, there is still a significant gap even in the delivery plan itself. The dredges cannot get along with two scows to haul away the removed soil. The dumping grounds, taking into account the length and specifics of the canal, are extremely far away and the soil will have to be hauled over great distances. And this means that the dredges will be forced into long idle times and will be used inefficiently.

The following circumstance must also be stipulated with all certainty. Equipping the canal workers even with the planned equipment will still be far from that which the Rostov workers suggested and which is needed for capital reconstruction of the waterway. The canal workers will also feel the deficiency of the material and technical base in the future.

The characteristic feature of the Volga-Caspian Canal is that of equipment to be used in different sections of it: either multibucket dredges or suction dredges. And one cannot replace another. And an acute shortage of suction dredges is expressed without foundation at Kaspreydmorput'.

"Obtaining additional equipment is not a goal in itself. Sooner or later life itself will force the canal to be deepened and widened," says P. Sablin.

"There is no way out of this. And the faster we get it in order, the sooner we will prevent serious national economic losses."

It would be valid if, along with the maritime workers, the fishermen, river workers and oil workers which cannot now get along without the Volga-Caspian

Canal, could make the corresponding expenditures on maintenance in the navigable canal. The Ministry of the Maritime Fleet can obviously bring this problem before the directive organizations for consideration. A combination of funds and efforts is the shortest path to success in which everyone is interested.

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## OCEAN AND RIVER

### PRESERVATION OF CARGO DISCUSSED

Moscow VODNYY TRANSPORT in Russian 20 May 82 p 2

[Article by Ye. Chipizhenko, chief of sector for claims and control of cargo preservation, Black Sea Shipping Company: "No Guarantee of Preservation"]

[Text] One of the main criteria of the quality of work of any maritime port is preservation of cargo. The material valuables produced for export and the goods required for the country should be delivered to the customers with minimum losses during shipment and handling in the ports.

Purposeful work is being carried out in this direction on each ship, cargo region and in management sections of our Black Sea Shipping Company and it has already yielded positive results. An indication of this is the reduction of losses of the shipping company during the past three years due to failure to preserve cargo. The total losses per ton of transported cargo comprised 4.94 kopecks in 1979, 4.22 kopecks during 1980 and 3.38 kopecks during nine months of 1981, respectively.

Many efforts were required so that the guarantee of cargo preservation became the subject of the compulsory concern not only of commercial subdivisions, of VOKHR [militarized guard] and the militia, but also of the managers of enterprises, of each department, ship crews and individual workers of the management apparatus.

Planning this work, effective control over execution and personal responsibility for its status are included in the annual plan of organizational and technical measures of the shipping company, worked out by the commercial service, on guarantee of safe shipment, storage and handling of cargo in ports. Similar documents are received in the ports and on ships.

The problem of the effect of port operation on losses of the fleet is not one posed accidentally. Such deficiencies as 3-4 changes of the cargo plan during loading, lack of preparation of cargo at warehouses, interruption of bill of lading lots, lack of conformity of up to 20-30 percent of hatch lists of the true disposition of cargo in ship compartments, unclear transport marking and determination of discrepancies in accounting for goods according to data of the port and service for servicing the transport fleet do not permit the ship to turn over the cargo to customers with high quality.

The struggle to preserve transported goods is being waged in the shipping company by groups of ships and by directions of cargo traffic volumes. Thus, extensive analysis of large shortages of entire locations of cargo on the Vietnam line, search and experiments yielded their own positive results. Rigid control of handling of ships bound for the SRV [Socialist Republic of Vietnam] by Odessa port, creation of a special Vietnam terminal, analysis of written reports of the captains of each ship about the quality of loading the ship, inclusion of two second mates in the crew with complex composition of cargo exceeding 1,000 bill of lading lots, local study of the characteristic features of turnover of cargo at ports of the SRV and as a result clear recommendations to the captains on this problem--all this made it possible to reduce the shortage of cargo on this line to a minimum.

The preventive work measures include raising the requirements on captains, second navigators for commercial-legal affairs with certification and specific training of them in special monthly courses. The commercial service and legal department began to issue bulletins of commercial-legal information each quarter that include critiques and analyses of errors and omissions of captains on cases of unpreserved shipment.

However, whereas a sharp decrease of losses was discernible on the Vietnam line--by a factor of 1.5 during 1981, a tendency toward an increase of losses was determined on the Cuba line and the total losses of the shipping company, although they have a constant tendency toward a decrease, still comprise more than 500,000 rubles annually in monetary terms. The inadequate requirements on the management of KhEGS [cost-accounting operating groups of ships] and on the captains of ships for the final results of voyages is still discernible. The errors and even rough omissions are frequently not evaluated at all by the management.

Here are some of the examples. A shortage and wetting of sugar were committed on the motor ship "Belitsk" on the Brazil-India voyage, but the crew, including the captain and second mate, were awarded a bonus for this voyage. A shortage of places occurred on the motor ship "Zhanna Lyaburb" on the Odessa-SRV voyage due to a failure to count the cargo by the crew, as was recommended by the shipping company. However, no strict measures against the guilty parties on the part of KhEGS were applied on time. Cargo worth 3,000 rubles was stolen on the motor ship "Leninskiy pioner" due to careless keeping of watch and poor checking of unloading at Odessa port.

The door left open at warehouse No 5 of Il'ichevsk Port contributed to stealing: a shortage of shirts was discovered in one crate. The negligence of port workers is also indicated by cases of detention of personnel from foreign organizations by VOKhR and the militia during attempts to remove stolen objects from the ports.

All this confirms that preventive, educational work is still low in some collectives and a situation of non-tolerance against thieves, so-called "carriers," has not been created. The cooperation of all organizations called on to solve these problems is important here and all forms and methods must be used in combination. The first experiment of joint planned measures in 1981 at ChMP [Black Sea Shipping Company] yielded positive results.

However, there are still unfortunately facts when new forms and methods, orders and recommendations of the shipping company are not brought operationally to the command staff. We administrative workers provide insufficient help to seamen in organization of executing our recommendations due to rare contacts with the crews even at Odessa and Il'ichevsk ports. Incidentally, the lag of captains in commercial problems is noticeably felt mainly because, working in the post of first mate, they essentially lose the qualifications acquired previously over a period of several years.

Organizational and technical measures for 1982 have been worked out with regard to the noted deficiencies and the results of analysis of guaranteeing the preservation of cargo at the shipping company. I would like to believe that they will serve as a further decrease of loss of cargo.

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## OCEAN AND RIVER

### BRIEFS

**DIESEL BOATS USED**--At the request of the river transport workers from the Northwestern Steamship Company, the schedule for drawing the Neva bridges was adjusted. Yesterday they let through this year's first caravan of large-capacity ships. This was done earlier than the traditional period. The "Volga-Balt" type diesel boats proceeded to the piers of Leningrad's enterprises. V. Fomin, chief of the steamship company, says that "using the heavy-freight fleet for intra-city transport is an important reserve for increasing the efficiency of transport in the Leningrad Transportation Junction. It makes it possible to remove part of the load from the railroad and main highways. For, just one diesel boat can deliver as much cargo during a voyage as an entire train." During the current navigation period, it is planned to transfer from railroads to waterways almost a quarter of a million tons of cargo more than last year. [Text] [Leningrad LENINGRADSKAYA PRAVDA in Russian 9 Apr 82 p 2] 9887

**SOCIALIST PLEDGES**--The port workers of Vladivostok are coping successfully with the increased socialist pledges adopted in honor of the 60th anniversary of formation of the USSR. They are handling 18,000 tons of cargo per day each compared to a planned 15,000 tons. The specialized brigade of pier 13 distinguished itself in unloading grain at the second region of the port. The Komsomol section of Yu. Tishchenko not only finished handling the motor ship "Khudozhnik Kustodiyev" previously, but also assisted their comrades in cleaning the holds on the "Vladimir Korolenko." [Text] [Moscow VODNIY TRANSPORT in Russian 8 May 82 p 1] 6521

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## MISCELLANEOUS

### ROLLING STOCK USED AS HOUSING FOR TYUMEN' ROAD BUILDERS

Moscow AVTOMOBIL'NYYE DOROGI in Russian No 4, Apr 82 p 32

[Article by deputy RSFSR minister of highways V. V. Mal'tsev: "Mobile Living Cars for Siberian Construction Sites"]

[Text] Greater and greater requirements are being imposed for the organization of good everyday living conditions for road builders right at construction sites that are remote from the central bases of road building organizations.

The Vologda Road Machine Plant of the RSFSR Ministry of Highways has done a great deal to improve the quality and increase the production of railroad cars used for living quarters (house cars). In 1981, for example, the plant manufactured a residential community consisting of 400 various types of cars and delivered them to workers of the newly formed Sibdorstroy [Siberian Road Construction] Trust in Tyumenskaya Oblast. For temporary living quarters they built two-room house cars with a kitchen, toilet, drying room, running hot water, centralized heat, and built-in furniture. The community includes dry-steam bathhouses, barber shops, a dining hall, a nursery school, a club, a library, and a medical point. All the cars were tested during the summer. Calculations by plant designers guarantee that they will also work normally during the winter.

The technology in use at the plant, however, is labor-intensive, complex, and does not entirely facilitate the production of modern, warm, comfortable living systems. The cars are heated by Mipor [microporous rubber] slabs which break during unloading and storage. Each year 600 railroad cars are needed to transport them. While the slabs are being dressed to the necessary dimensions by an electrical string device harmful substances are given off and dust and a large amount of waste products form. Mipor slabs do not insure a solid coupling at joints.

Finishing work and painting is done on the already-assembled car, which creates unfavorable working conditions. The cars being produced are metal-intensive and must be assembled from a large number of parts. The design of the walls, floors, and ceilings does not permit cars to be assembled with different layouts and capacities. The present production technology for the house cars does not insure adequately high work sophistication.



In the 11th Five-Year Plan the collective of the plant of the Rosremdormash [RSFSR Road Machinery Repair] Association, together with the Administration of Construction Industry of the Ministry and in cooperation with the Leningrad ZNIEP [Zonal Scientific Research and Planning Institute for Standard and Experimental Planning of Residential and Public Buildings] Institute of the USSR State Committee for Civil Construction, should introduce new technology at the plant and organize the production of modular and mobile living systems.

Taking account of domestic and foreign experience the RSFSR Ministry of Highways adopted a decision to introduce a new technology for manufacturing panels and various panel systems. For the first 3-4 years, on a temporary basis, FMP-3 insulation will be used in the panels, and then replaced by polyurethane, which has excellent insulating properties and greatly simplifies work technology. The design of the products and the layout and convenience of the cars will be radically improved. Working conditions and production sophistication at the plant will improve. In 1982 production of Uyut cars for workers engaged in repair and maintenance of motor vehicle roads will begin. Plans contemplate using railroad cars to set up repair shops for field machinery. The Vologda plant will also produce a system of blocks which can be used at construction sites to assemble buildings of the necessary designation and capacity very quickly.

Introduction of the new technology and living systems will make it possible to double the volume of production of new, mobile and rapidly-installed modular buildings for road workers of the republic. All growth is to be achieved without increasing the number of workers or the production area of the plant.

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NEW GROUND-EFFECT VEHICLE FOR INACCESSIBLE NORTHERN REGIONS TESTED

Moscow IZVESTIYA in Russian 21 May 82 p 3

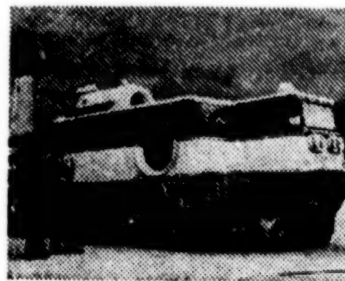
[Article by N. Tolstova: "The Tayfun"]

[Text] This transportation vehicle does not need roads. It can travel across impassable peat marshes or over the surface of bodies of water just as well as along solid ground.

It is no mistake that designers at the Ufa Aviation Institute imeni S. Ordzhonikidze gave their creation the striking name "Tayfun" [Typhoon]. This ground-effect vehicle can reach a speed of 120 kilometers an hour! The passenger compartment of the all-terrain vehicle holds 12 people easily, and has a load capacity of two tons.

Under the bottom of the vehicle, which is circled by an elastic "skirt," a compressor forces out air which forms a kind of "cushion" that raises the vehicle above the surface. The gas turbine engine with a propeller and control surfaces enables the vehicle to move in the necessary direction at high speed.

The Tayfun is designed to serve the petroleum and gas pipelines of the difficult-to-reach regions of the Far North and Western Siberia. The vehicle went through comprehensive testing in Bashkiria last year and is now being prepared for series production.



It is noteworthy that this vehicle, so necessary to the national economy, was developed in one of the student design bureaus of the institute. This project went on for about 10 years under the direction of candidate of technical sciences S. Komarov. Many former students went on to work in production and actually utilize the vehicle that had been conceived in the classrooms of the institute.

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